Ex-Sight.Com LTD

Ex-Sight.Com

HD Series
Webpage User's Manual

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WHAT'S NEW

K1.2.0

[Network Configuration] HTTP is added.
[Maintenance] System log is added.
[Maintenance] Firmware Update is changed.
[Basic Configuration] Users is changed.
[Video&Audio] Repositioning is changed.
[Video&Audio] Stream is changed.
[Event Configuration] TCP Notification is added.
[Event Configuration] TCP Server is added.
[Event Configuration] Multicast Notification is added.
[Event Configuration] Event Profile is changed.
[Peripheral] DI/DO is changed.

1. INTRODUCTION

1.1. Welcome

This manual explains how to interface with the H.264 codec supporting IP camera series using the Microsoft® Internet Explorer web browser. The Web Page of the product has been implemented with the protocols below:

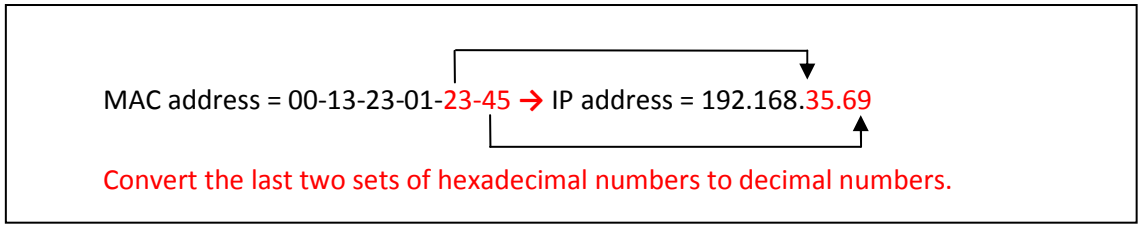
- HTTP API – Parameter configuration commands
- RTP/RTSP – Video, Audio, and Metadata Streaming
- Active X program – Image display on client PC

1.2. Getting Started

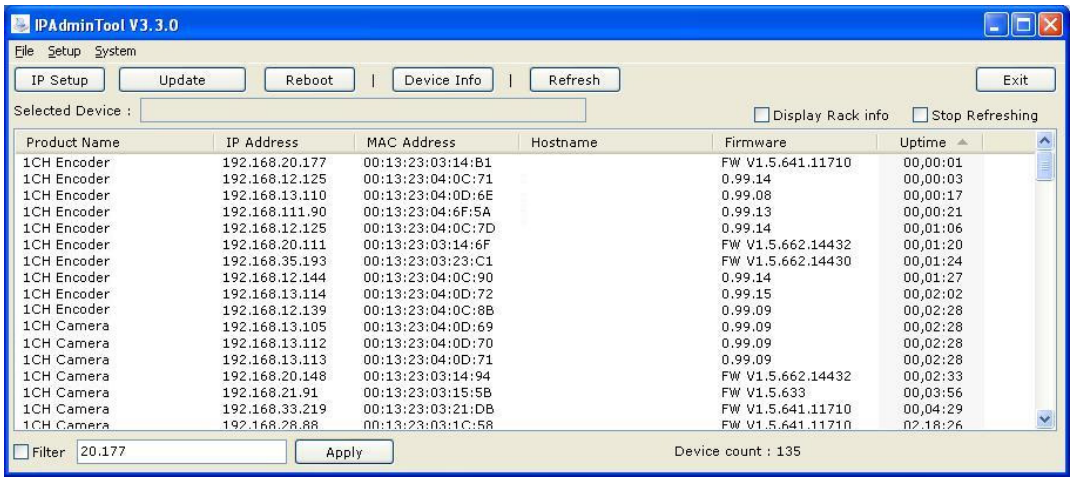
Before utilizing the web interface, install and connect the camera and other physical devices. Refer to the hardware manual supplied with your SDK for the product installation steps. The installation manual provides detailed information for installation and configuration of the device.

1.3. IP Address Setting

How to find the IP Address of your device:
The product has its unique IP address, and users can identify the address by converting the MAC address' last two sets of hexadecimal numbers described on the sticker that is attached to the device. Refer to the following figure and check how to convert a MAC address to an IP address. Type the identified IP address in the address bar of the Internet Explorer to access the web page of the product.



How to change the default IP address:
IPAdminTool software allows users to search and change the IP address of connected devices. The figure below shows a main UI of the IPAdminTool. The IPAdminTool helps to search multiple devices. Please refer to the '*IPAdminTool User's Mangual.pdf*' for the detailed information and its usage.



What is IPAdminTool?
IPAdminTool automatically scans all of the products including encoders and cameras on the network and displays product's information, including product name, IP address, MAC address, firmware information, and devices' uptime. The tool also allows user to change the IP address or update the firmware. '*IPAdminTool User's Manual.pdf* 'is available in the SDK (\DOC) folder, and it is highly recommended for user to review before using this tool for better understanding of the software functions and administration controls.

Location of IPAdminToo.exe : \BIN\TOOLS\AdminTool
Location of the manual of IPAdminTool : \DOC\

Limitation of the concurrent clients
Depends on streaming configurations and settings, simultaneous connection might reach the limitation due to system maxed-out capability.

- ✓ RTSP Streaming, Unicast: Heavily depends on the maximum throughput in a given time.

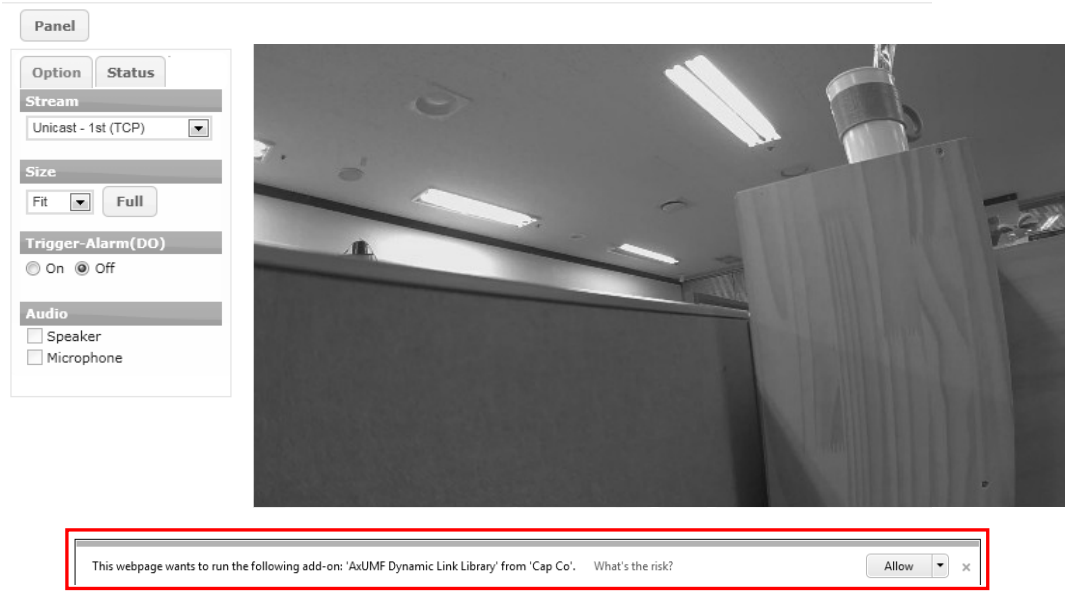
2. USING A WEB BROWSER

After the network and power connection are established, access the web browser to view the live streaming of the connected device. Installation of the ActiveX is required to see the live page and access full controls in Microsoft® Internet Explorer.

2.1. ActiveX Installation (AxUMF.cab)

For full control of a device through a web browser, installation of the ActiveX control is required. Refer to the following steps to install the ActiveX. Disable the Pop-up blocker or run "Add-on" notice in a browser to install the ActiveX and Installation file.

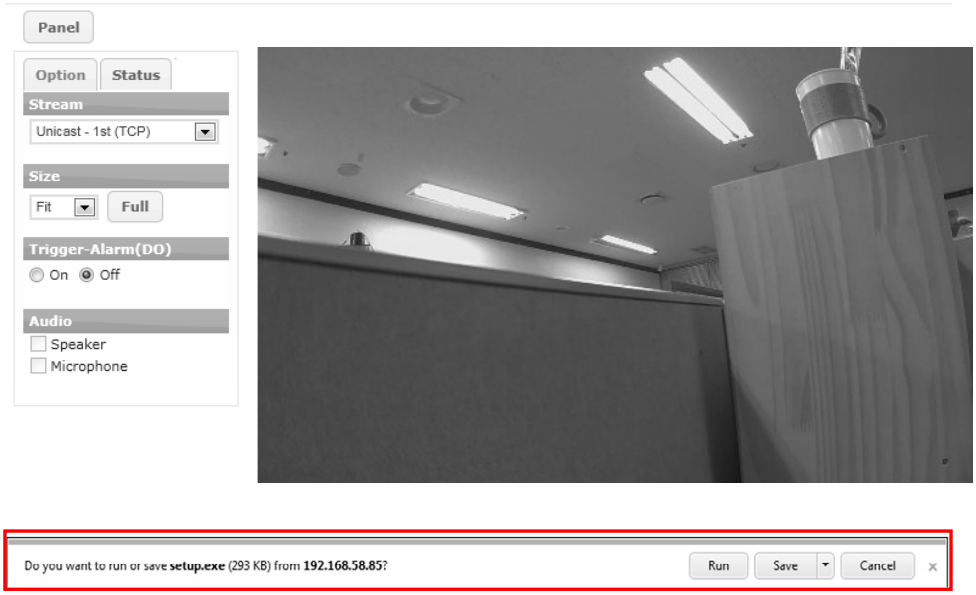
1. Click the installation warning message on the view page as below. Jpeg snapshot is displayed every 1 second before you install AxUMF.cab



2. Click the **Install** button on the warning message box. If the page is not responding after the installation, refresh the page.

Internet Explorer - Security Warning
Do you want to install this software?
Name: AxUMF.cab
Publisher: Cap Co
More options
Install
Don't Install
While files from the Internet can be useful, this file type can potentially harm your computer. Only install software from publishers you trust. What's the risk?

3. Install the setup.exe file by clicking the link shown on the main page. Jpeg snapshot is displayed every 1 second before you install setup.exe.



4. Follow the instructions of the dialog boxes and complete the installation.

File Download - Security Warning
Do you want to run or save this file?
Name: setup.exe
Type: Application, 293KB
From: 192.168.208.245
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

5. When the dialog box appears to request user name and password, enter the default value for the administrator account (case-sensitive) as below:
   User Name: *root*
   Password: *pass*
6. Refresh the page and check if the live image is displayed successfully.

2.2. Recommended PC Specification

The following table describes the recommended requirement of the PC system to use a Web browser with our products.

Item	Recommended
VGA	D3D support
OS	XP, Vista, 7
Direct X	9.0

Note

Officially ***Internet Explorer*** is supported only.

3. LIVE PAGE CONFIGURATION

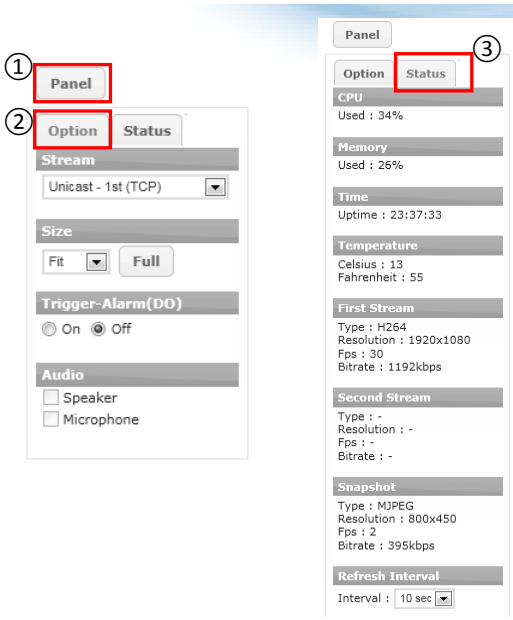
When the device is accessed through the web browser, the live image of the device appears on the window. To go back to the **Live** page either from the **Storage** or **Setup** page, click Live on the upper left corner of the web page.

3.1. Log In

To access the device on the web browser:

1. Enter “root” for the user name and “pass” for the password on the pop-up window.
2. Click the OK button to access the main page.

3.2. Live Page Menus



① **Panel:** Clicking the Panel button enables users to hide/show the menu tab.

② **Stream:** If you go to **Setup > Stream > Snapshot** and tick *Enable*, *Snapshot* will be added and default value will be applied automatically.
Trigger Alarm (DO): If you go to **Setup > Peripheral > DI/DO** and tick *Enable*, menu will be activated and you can control *On/Off* of DO.
Audio: Audio-Speaker will be activated when *Input Enable* of *Audio* tab **(Setup > Stream > Audio)** and *Enable* of *Include audio stream* **(Setup > Network Configuration > RTSP/RTP)** are ticked.
Audio-Microphone will be activated when *Output Enable* of *Audio* tab **(Setup > Stream > Audio)** and *Enable* of *Include audio stream* **(Setup > Network Configuration > RTSP/RTP)** are ticked.
"Speaker" is a function to output audio of camera to client and *"Microphone"* is a function to output audio of client to camera.

③ **CPU**: Usage of CPU
Memory: Usage of memory
Time: Time after booting
Temperature: Display camera temperature as ℃/℉.
First/Second/Snapshot: Display current information of each stream.
Refresh Interval: Configure: Set refresh interval

If the live image is not shown,
1. Check if the camera is powered on and connected properly.

2. When using the Internet Explorer, check if the ActiveX control is installed. For other types of web browsers, the live image is displayed via QuickTime Player.

Note

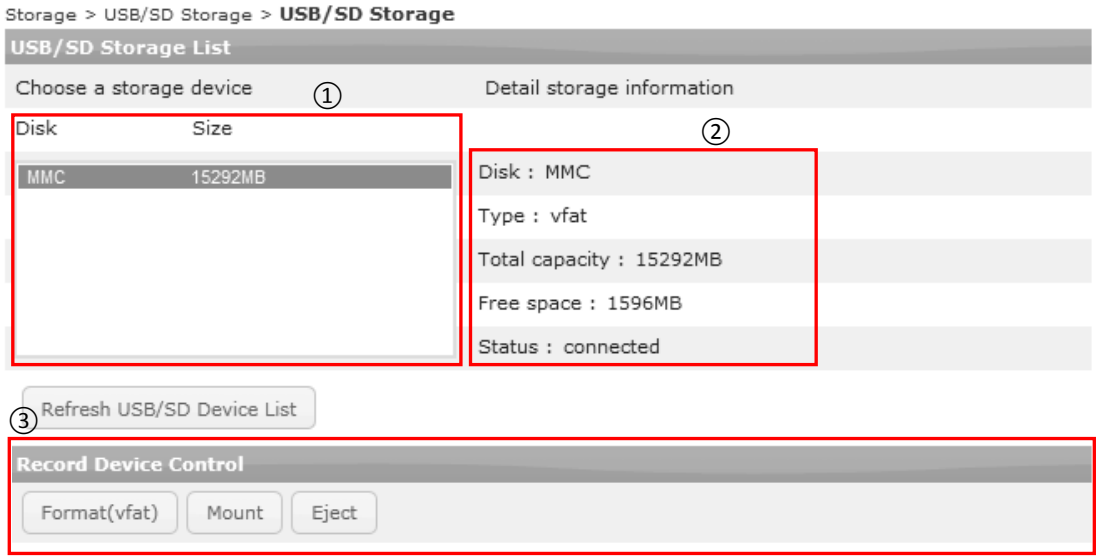
If Direct3D Acceleration is disabled, you may not see the view page. In case of the blue screen appears instead of the proper video, please type 'dxdiag' from **Start** > **Run** on your computer and check the DirectX Features.

4. STORAGE CONFIGURATION

From the Storage page, users can configure the USB or SD storage device settings and AVI recording settings.

4.1. USB/SD Storage

To search mounted USB/SD storage devices and check the device information, click **Storage** > **USB/SD Storage**.



① **Device List**: The mounted devices are listed by clicking the Refresh button or F5.

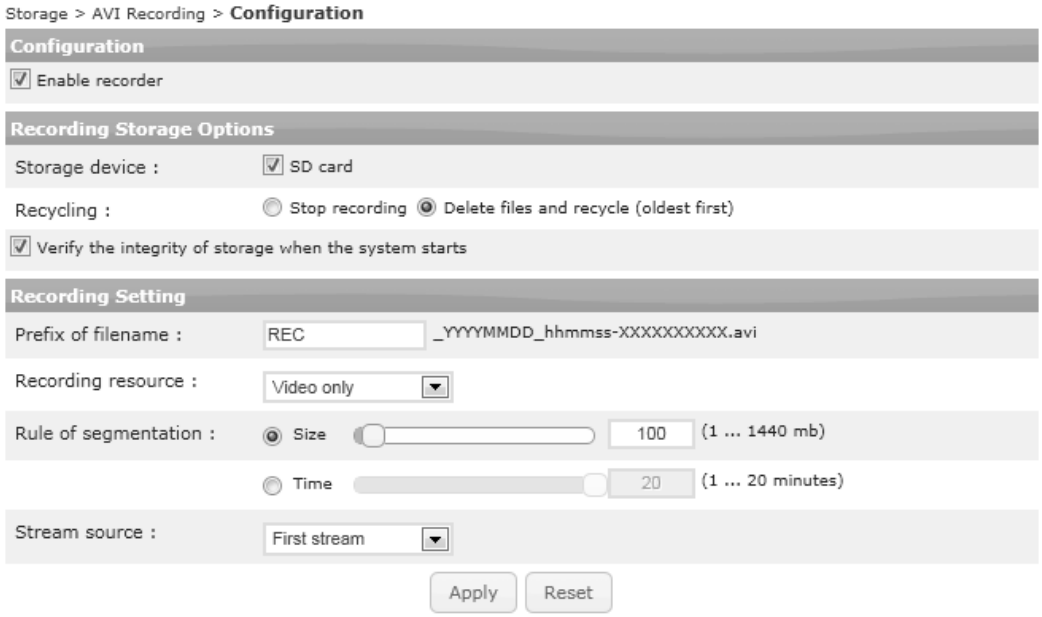
② **Device Information**: The detailed information of the selected storage device is displayed. The information includes device name, type, total capacity, free space, and device status.

③ **Record Device Control:** Control allows users to format, mount, or eject storage device that is available from the device list.

To start the AVI recording, the device status must be connected. If the connected device does not appear, try to reboot the device and check its status again.

4.2. AVI Recording

For the AVI recording configuration, click **Storage** > **AVI Recording** > **Configuration**. On this page, users can enable or disable the recording capability, configure the recording storage option and recording conditions, and perform the instant recording.



Automatic recording

Configuration
Check the *Enable Recorder* box to start recording.

Recording storage Options
Select the storage device type from SD card.

Recycling options
Users can select one of the options when the storage is full.

- **Stop recording:** Stops recording and keep the recorded data.
- **Delete files and recycle (oldest first):** Replace oldest files with latest files (based on dates).

Prefix of filename
Give relevant name that will be used as the recorded file. For easier recognition of duplicate files, the end of every recording file name includes the date and time information as a default.

Recording resource
Select the choice between 'Video only' and 'Audio+Video'.

Rule of segmentation
- **(by) Size:** The range of the file size is from 1 to 1440 Megabyte(s).
- **(by) Time:** The range of the recording length is from 1 to 20 minute(s).

Stream source
Users may choose primary recording source from either first stream or second stream. If it is a single stream, the second stream option is unavailable.

Manual recording (Instant recording)

If the Start button is pushed, the recording will be started immediately. Before pressing the start button, type desired recording time (seconds) in the box next to the start button. The system default is 60 seconds, and available recording time is from 10 to 600 seconds. (10 minutes) While the recording is in progress, the button label changes from "*Start*" to "Stop"; Users can manually stop the recording whenever it is desired.

When the recording is complete, click 'download' button appears on far right; Click the button to download the recording as a file.

4.3. AVI File Download

To view and download the recorded files, click **Storage** > **AVI Recording** > **File Download**.

All of the recorded files are listed on the File Download page. Currently recording file is displayed as [Recording] on the Download column. Users can select the desired file from the list or search it by date. To list up the files which are recorded on a specific date only, click on the Search box. A calendar appears from the search box and select the desirable date. To go back to the original list, click the 'x' button next to the Search box.

To download a file, click [Download]. Then, the pop up window appears for the file download.

5. SETUP

To configure the setting values of the device, click Setup on the main page. To access the Setup page, ID and passwords are required.

5.1. Basic Configuration

The Basic Configuration provides the menus required for the basic settings that a user must configure after the camera installation.

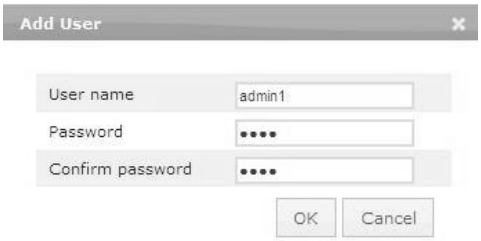
5.1.1. Users

To create/remove/modify a user group, go to **Setup** > **Basic Configuration** > **Users**.

How to add a user

To add a user for the webpage,

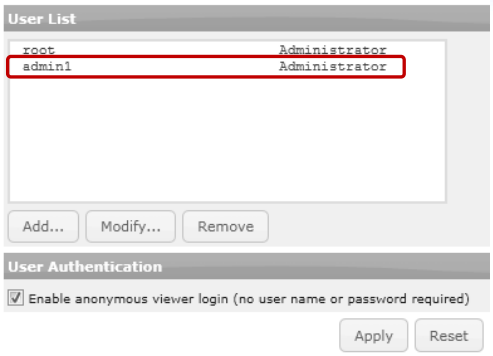
1. Go to **Setup** > **Basic Configuration** > **Users**.
2. Click the Add button below the User List.
3. When the pop-up window appears, type a user name and password.



Limitation on user name
The user name can consist of alphabets from “a” through “z”, numbers from 0 to 9, and underscore symbol; the user name must begin with an alphabet letter.
Length: The length of user name must be between 3 and 32.
Character range: All upper or lower case letters, numbers from 0 to 9, and underscore

Limitation on password
A password can contain from 1 to 8 characters with a combination of alphabet and numbers.
Length: The length of password must be between 4 and 32.
Character range: All upper or lower case letters and numbers from 0 to 9

4. Click the OK button to save the changes.
5. Check if the user name is added to the list.



User Authentication
Enable or disable for anonymous viewer to connect *Live* page.

How to modify a user

To change your password or user name,

1. Go to **Setup** > **Basic Configuration** > **Users**.
2. On the User List, highlight user name.
3. Click the Modify button below the User List.
4. When the pop-up window appears, type the new password.
5. Re-type the same password again on the 'Confirm password' text box.
6. Click the OK button to save the changes.

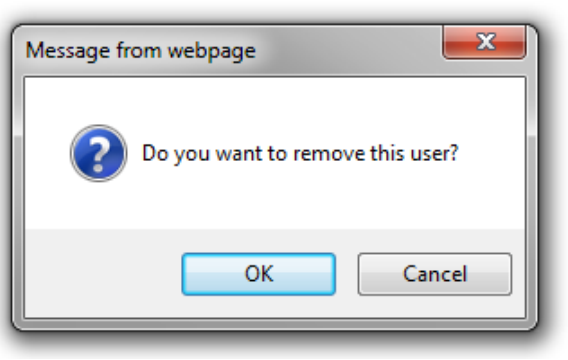
Note

Once the user name is set, it cannot be modified. Simply remove the user name and add a new user with desired name.

How to remove a user

To remove a user name form the User List,

1. Go **Setup** > **Basic Configuration** > **Users**.
2. Select the user name to remove on the User List.
3. Click the **Remove** button below the User List.
4. When the dialog box appears to confirm your request, click the **OK** button.



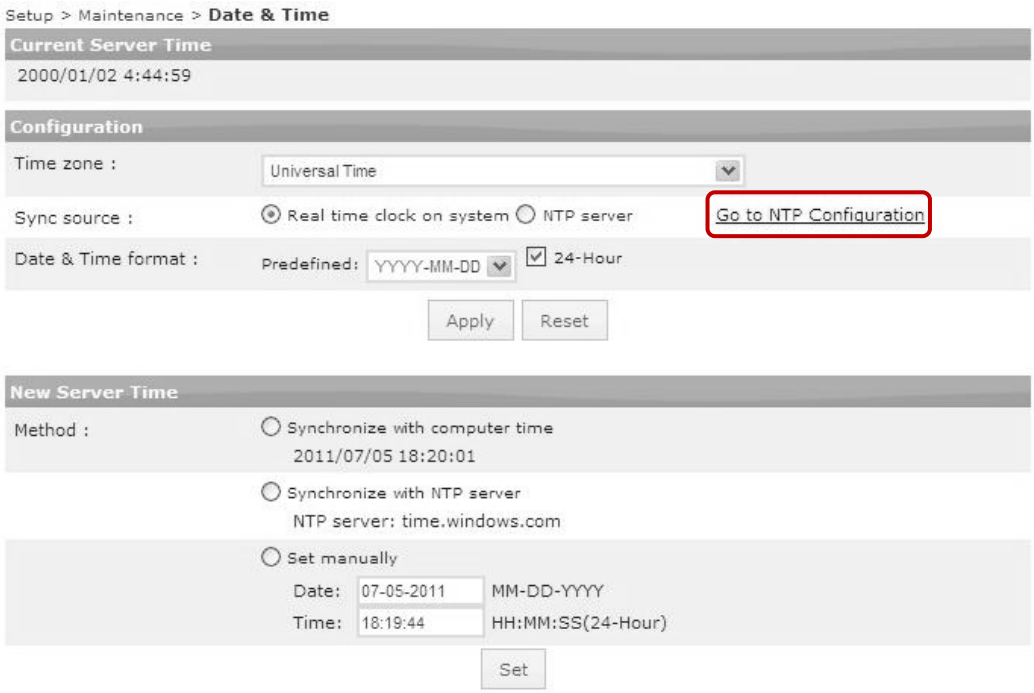
5. Check if the user name is removed from the list on the page.

5.1.2. TCP/IP

Refer to *5.4.1. Setting TCP/IP (DHCP, Static IP, DNS setting*) for TCP/IP configuration.

5.1.3. Date and Time

Time setting is very significant for all parts of the product server because it affects the log of streaming and burnt-in text of video. To configure the date and time, go to **Setup** > **Basic Configuration** > **Date & Time**.



Current server time

It shows the camera's recognized time.

Configuration

Time zone
Select the proper time zone of where the camera is installed from the drop-down box. Daylight saving time applies automatically.

Sync source
Real time clock on system – Time setting relies on the Real-time clock which is inside the camera. The clock chip is attached as internal part of the product, and it is recharged automatically when the device is powered.
NTP server – Time setting relies on designated NTP server. Users can configure available NTP servers at **Setup** > **Network Configuration** > **NTP**. Four NTP server lists can be added, and the first top list is the default source of the time (time.windows.com).

Date and time format
Select the desired date and time format from the drop-down list box.

New server time

Select one of 3 options:

- Synchronize the server with client system time
- Synchronize the server with NTP server
- Set the server time manually

5.1.4. Stream

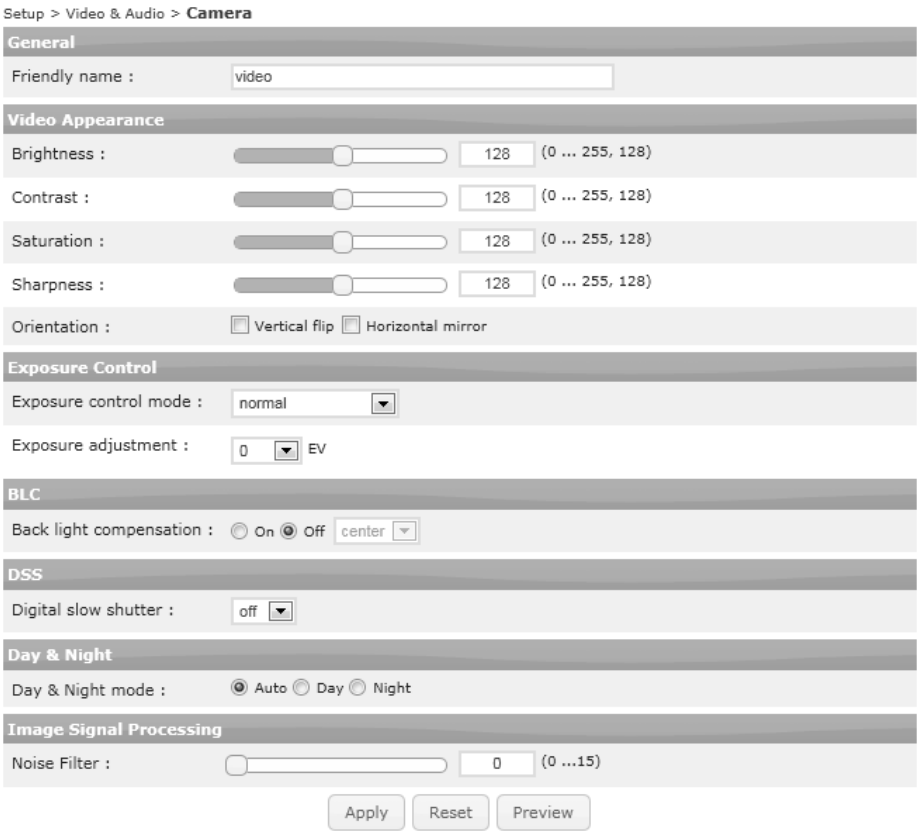
The Stream configuration page from **Setup** > **Basic Configuration** > **Stream** operates the same way as of the page from **Setup** > **Video & Audio** > **Stream**. Refer to *5.2.6. Stream* for the details.

5.2. Video and Audio

To change the setting for video input, burnt-in text, encoder profile, and steam, go to the Video & Audio page by selecting **Setup** > **Video & Audio**. This menu is configured with five sub menus: Camera, Repositioning, Burnt-in Text, Encoder Profile, and Stream.

5.2.1. Camera (channel naming/video format/ color control)

Camera section under the **Video & Audio** menu enables user to modify the camera image characteristics.



The camera setting page provides options to:

- Name a channel for the camera
- Set image attributes
- Adjust the image exposure
- Configure the image signal processing
- Preview the current setting

Click the *Apply* button to save the changes, and the Reset button to return to the previous setting.

Friendly name
Users may provide friendly name (alias) to an individual camera in case when utilizing multiple channels and cameras. Using alias is recommended to distinguish the device where environment requires multiple image feedbacks with multiple monitoring devices.

Video Appearance
Brightness, contrast, saturation, sharpness and orientation are adjusted.
Brightness: The range is from 0 to 255, the default is 128.
Contrast: The range is from 0 to 255, the default is 128.
Saturation: The range is from 0 to 255, the default is 128.
Sharpness: The range is from 0 to 255, the default is 128.
Orientation: Select vertical flip or horizontal mirror an object.

Sharpness is affected by installed environment. Here in the web menu's "range" definition is operating range, therefore configuring the right value for each camera is necessary.

Exposure control
Selecting the right exposure control mode depends on the installation site's environment. 3 modes are available; normal, flickerless-50Hz and flickerless-60Hz. (During the normal mode, it automatically adjusts the shutter speed. If the camera is utilized under the florescent light, it is recommended to select between flickerless (50/60Hz) modes to compensate the light flickering.)
Correct exposure value should be selected from the list box to adjust the target brightness for the automatic exposure setting. The high value makes the image brighter, and the low value makes the image darker. Select the value as follows: +1.0, +0.6, +0.3, 0, –0.3, –0.6, –1.0(EV)

BLC
Identify the area where the image is underexposed due to strong light from nearby area for camera to increase exposure amount.

DSS
Turn on or off the digital slow shutter, depends on needs.

Day & Night
Three different day/night modes are supported: Auto, Day, and Night. Select the desired mode based on the installation environment. Default value is *Auto*.

Image Signal Processing

When noise filter value is 0, the noise filter is off. The noise suppression is performed to the maximum when the value set is 15. The video quality will suffer when the value is set to the highest. The range is from 0 to 15, and the default is 0.

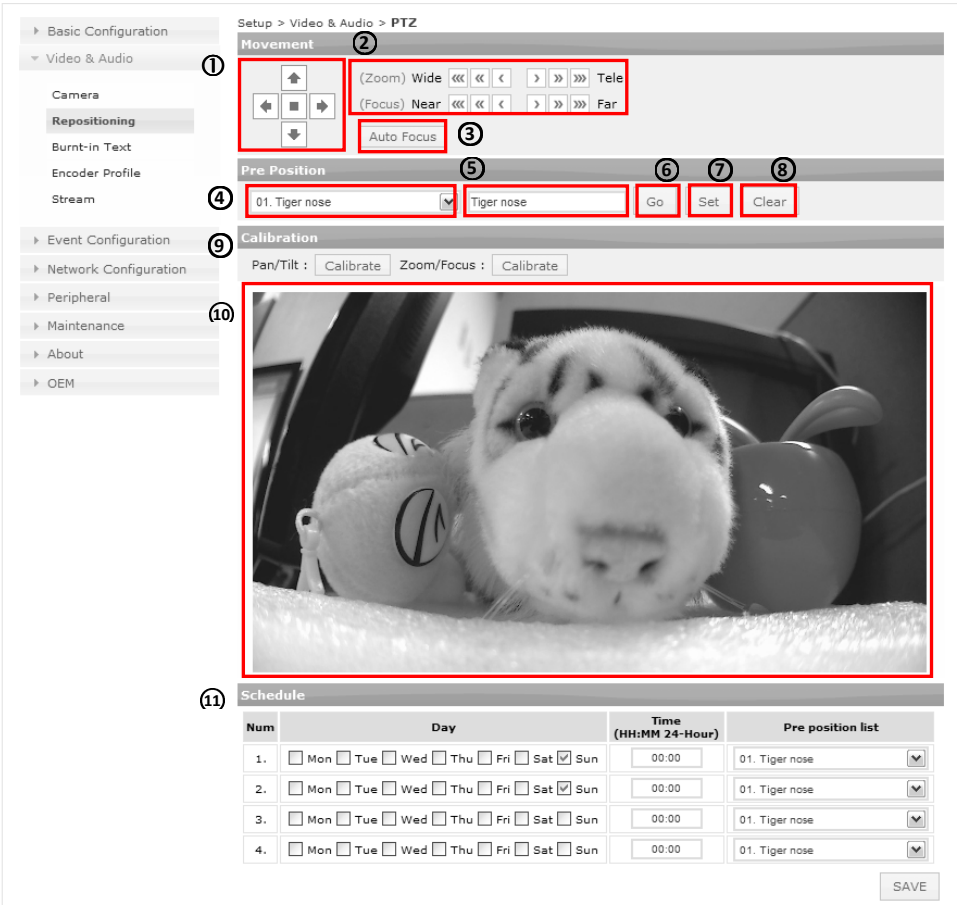
Using the Preview button

Preview window appears with current setup visuals. When settings are applied, the preview window displays the user's latest modification. The preview window displays respected video channel (tab) that the user is currently modifying.

5.2.2. Repositioning

Note: This part is for the repositionable dome cameras only.

To change the repositioning setting, go to **Setup** > **Video & Audio** > **Repositioning**



① **Arrow button**: The camera can move to 4 directions; up, down, left, and right. The camera moves to the desired position while the button is clicked and hold. Stop button can be used while using zoon/focus settings (②) or auto focus settings (③).

② **Zoom/Focus button**: 3 levels of movements are available for wide, tele, near and far movements. Clicking the 3 arrows button moves the lens extensively than 1 arrow button.

③ **Auto focus**: Automatically set the lens focus.

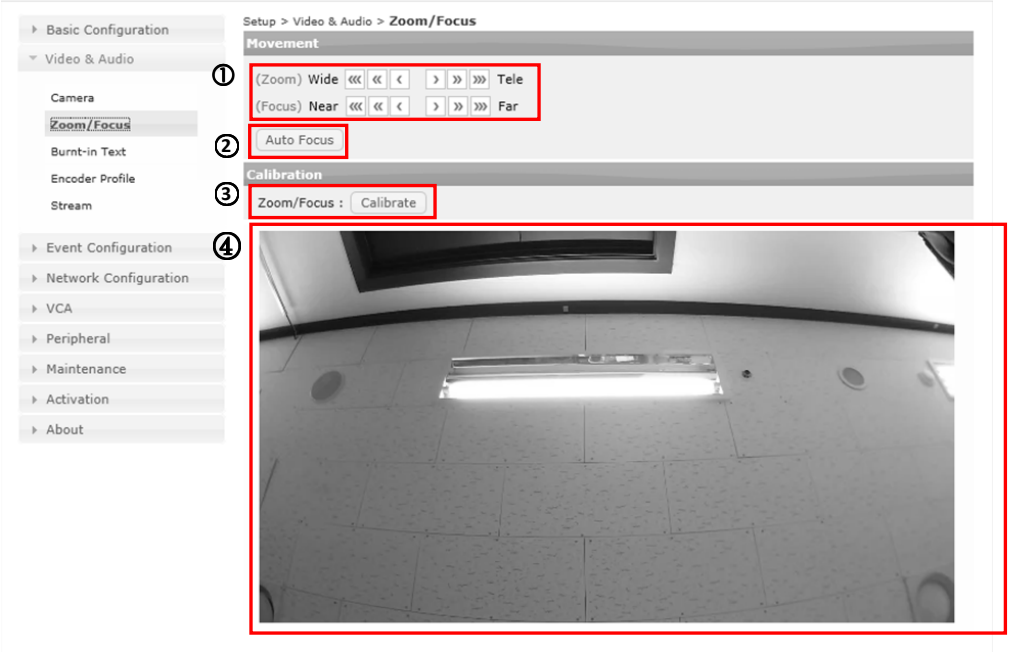
④ Stored position list (available to store maximum 16).

⑤ Text box to enter name of appointed position.
⑥ **Go**: Move to selected position after select one of ' ④' list and click 'Go' button.
⑦ **Set**: Save the current camera position after setting ④ and ⑤. Enter texts in ⑤ also appears on ④ and next to the assigned number.
⑧ **Clear**: Removes the current position of ④. Make sure the wanted preposition is on ④ before click the button.
⑨ **Pan/Tilt**: Move Pan and Tilt to default location.
Zoom/Focus: Move zoom and focus to default location.
⑩ Preview screen.
⑪ Set up to 4 schedules of prepositions to focus on during desired date and time periods.

5.2.3. Zoom/Focus

Note: Zoom/Focus is for motorized lens cameras only.

To change the Zoom/Focus setting, go to **Setup** > **Video & Audio** > **Zoom/Focus**



① Zoom/Focus button: 3 levels of movements are available for wide, tele, near and far movements. Clicking the 3 arrows button moves the lens extensively than 1 arrow button.

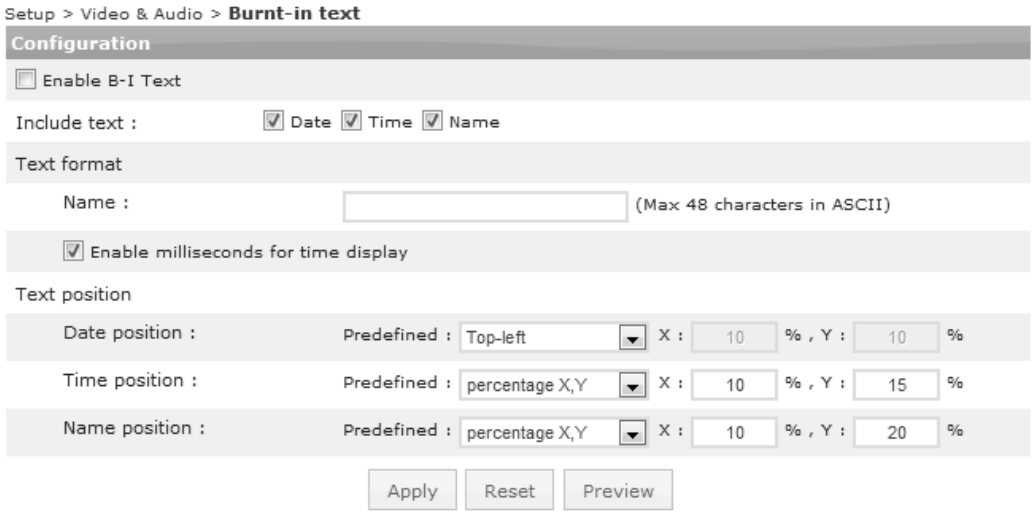
② Auto focus: Automatically set the lens focus.

③ Zoom/Focus Calibrate: This function rectifies misalignment by rebooting to a zeropoint and then aligning to a correct position.

④ Preview screen.

5.2.4. Burnt-in Text

To change the burnt-in text setting, go to **Setup** > **Video & Audio** > **Burnt-in Text**.


Setup > Video & Audio > Burnt-in text
Configuration
Enable B-I Text
Include text : Date Time Name
Text format
Name : (Max 48 characters in ASCII)
Enable milliseconds for time display
Text position
Date position : Predefined : Top-left X : 10 % , Y : 10 %
Time position : Predefined : percentage X,Y X : 10 % , Y : 15 %
Name position : Predefined : percentage X,Y X : 10 % , Y : 20 %
Apply
Reset
Preview

The setting of the Burnt-in Text is applied to first stream, second stream (if the device supports) and snapshot modes identically. To add burnt-in text, select the *Enable* check box after the setting and click the *Apply* button.

What is Burnt-in Text?
Burnt-in Texts 'burns' information into streaming visuals before it gets compressed, thus prohibiting manipulation or alteration of the events' time. It allows the file to become reliable evidence as it discourages intentional manipulation of the date and time for an alibi.

Text configuration
Select information (Date, time and name) to include as the burnt-in text in image. To include a specific name or info, type the desired text on the name text box. To display millisecond (time), check the 'Enable milliseconds for time display' checkbox.

Text position
Set where the burnt-in text will be positioned in image. Predefined locations are provided as well as manual position options.

Note

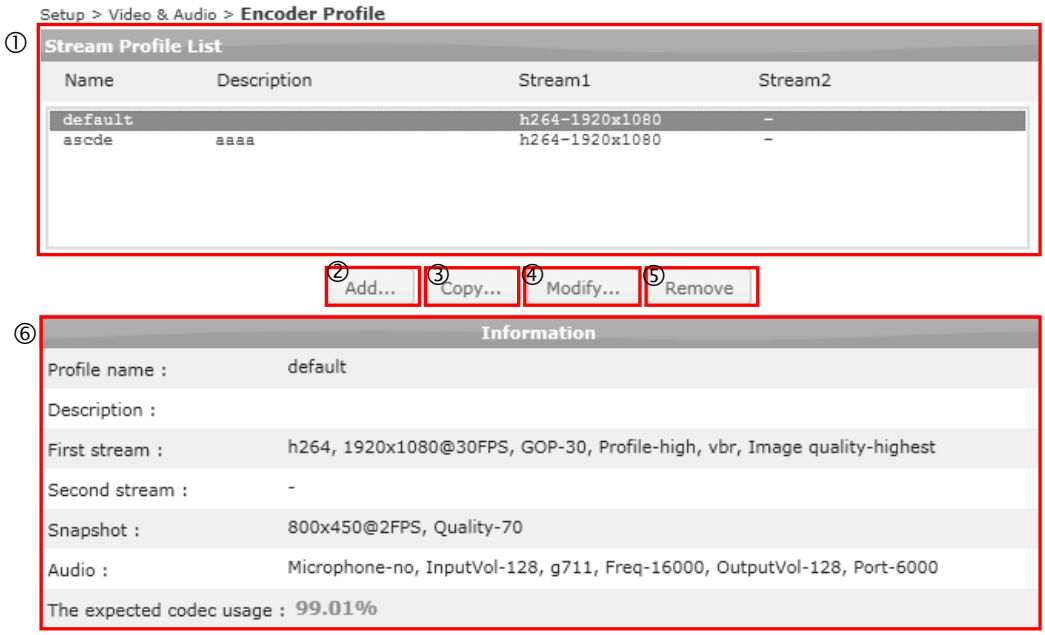
It is recommended to use normalized X, Y instead of predefined positions (left-top, left-bottom, right-top, right-bottom) for the burnt-in text positions. Selecting same predefined positions on all three categories may cause overlapping texts, depending on image resolution or the position of each text. Utilizing PREVIEW is highly encouraged to review the selected positions of those burnt-in texts.

Preview

Preview button allows to view the visual with applied settings (need to press APPLY to view).

5.2.5. Encoder profile

To create pre-defined encoder profiles, go to **Setup** > **Video & Audio** > **Encoder Profile**.



You can check the defined profile list on the main page, and add, copy, modify, or remove a profile.

① **Stream Profile List**: Lists the defined encoder profiles.

② **Add**: Click this button to add a new profile.

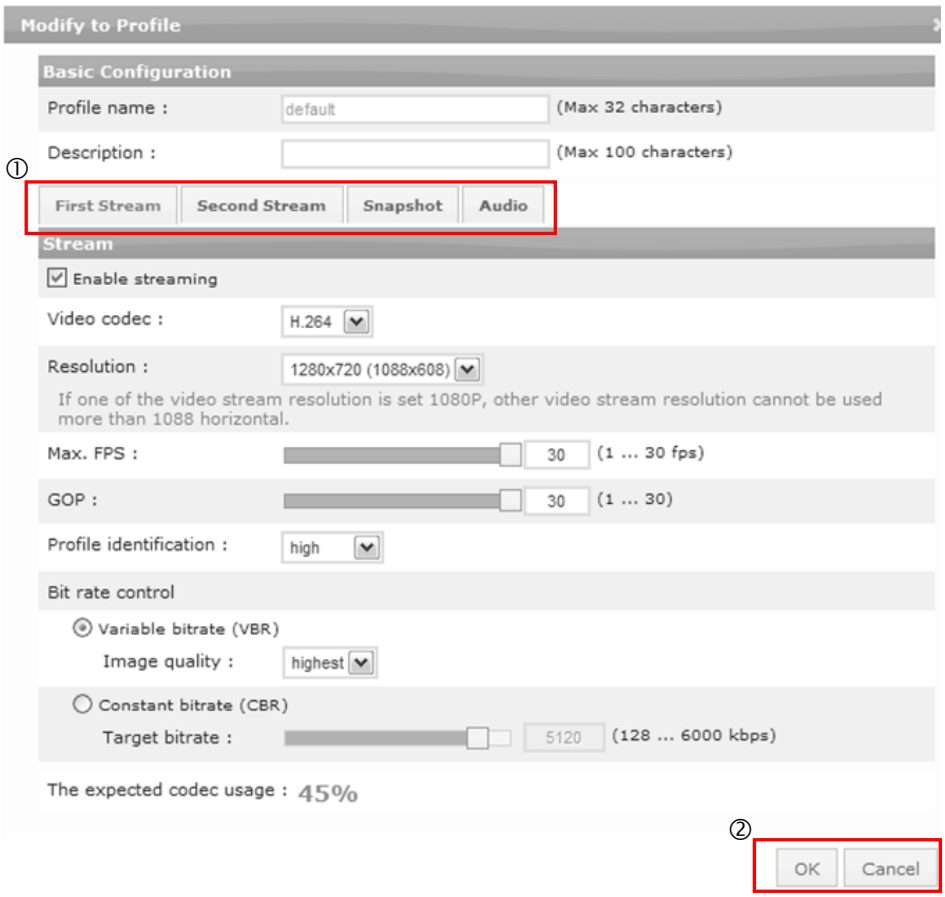
③ **Copy**: Select the desired profile to copy and click this button to copy an existing profile and easily create a new profile by modifying few options.

④ **Modify**: Select the desired profile to modify and click this button to change the current settings of the profile.

⑤ **Remove**: To remove a profile, select the desired profile and click this button. The default profile cannot be removed.

⑥ **Information**: Detailed information is shown below the profile list.

If you click either one of *Add*, *Copy*, or *Modify* button, the profile configuration page appears as shown below. On this page, users can configure the settings for each stream, snapshot and audio separately.



① Users can configure streams, snapshot and audio settings.

② Click"Ok" button to apply all changes to the current profile, or click "Cancel" button to go back to the last saved profile.

Stream Configuration (First Stream and Second Stream)

The expected codec usage

The expected codec usage is calculated automatically according to your configuration parameters. Do not exceed the usage over 100%.

Enable streaming

Check the 'Enable streaming' box to enable streaming on the selected stream. Always keep unused streams disabled.

Video codec
Select the video codec from MJPEG and H.264.

Resolution
The supported resolution in pixels for the current stream profile is listed on the drop down box. Select the desired resolution. If one of the video streams is set to 1080P, the other video stream resolution cannot have more than 1088 resolution pixels horizontally.

Maximum FPS
Define the desired frame rate per second.

GOP
This parameter defines the length of the group of pictures. If this value is set to 1, the video stream will only have one I-frame. Keep this value high to minimize bandwidth.

Profile Identification
This option allows the user to select between three H.264 different profiles. This directly affects the quality of the video due to the amount of compression applied. *Baseline* profile provides maximum compression to the video. *High* profile gives the best quality. Selecting the *Main* profile is balances between the other two.

Variable bitrate (VBR)
VBR allows a higher bitrate (and therefore more storage space) to be allocated to the more complex segments of media files while less space is allocated to less complex segments. It is used when the system has enough storage and a high quality image is required. Image quality can be configured as highest, high, normal, low and lowest.

Constant Bitrate (CBR)
CBR mode maintains the defined bitrate level all the time.

Snapshot Configuration

Once the snapshot ability is enabled, it will not stop until the checkbox is unchecked and applied "ok" button.

Enable snapshot
Check the Enable streaming box to enable snapshot on the selected stream.

Resolution

The supported resolution for the product is listed on the drop down box. Select the desired resolution. If one of the video streams is set to 1080P, other video stream resolution cannot be used as greater than 1088 horizontal.

Maximum FPS
Enter how many snapshot files you want to send per a second. The maximum value is 5.

JPEG quality
Enter the JPEG quality. The range is from 0 to 100 and '100' means the best quality.

Audio Configuration

Enable audio
Select the enable check box for the microphone or speaker to be enabled.

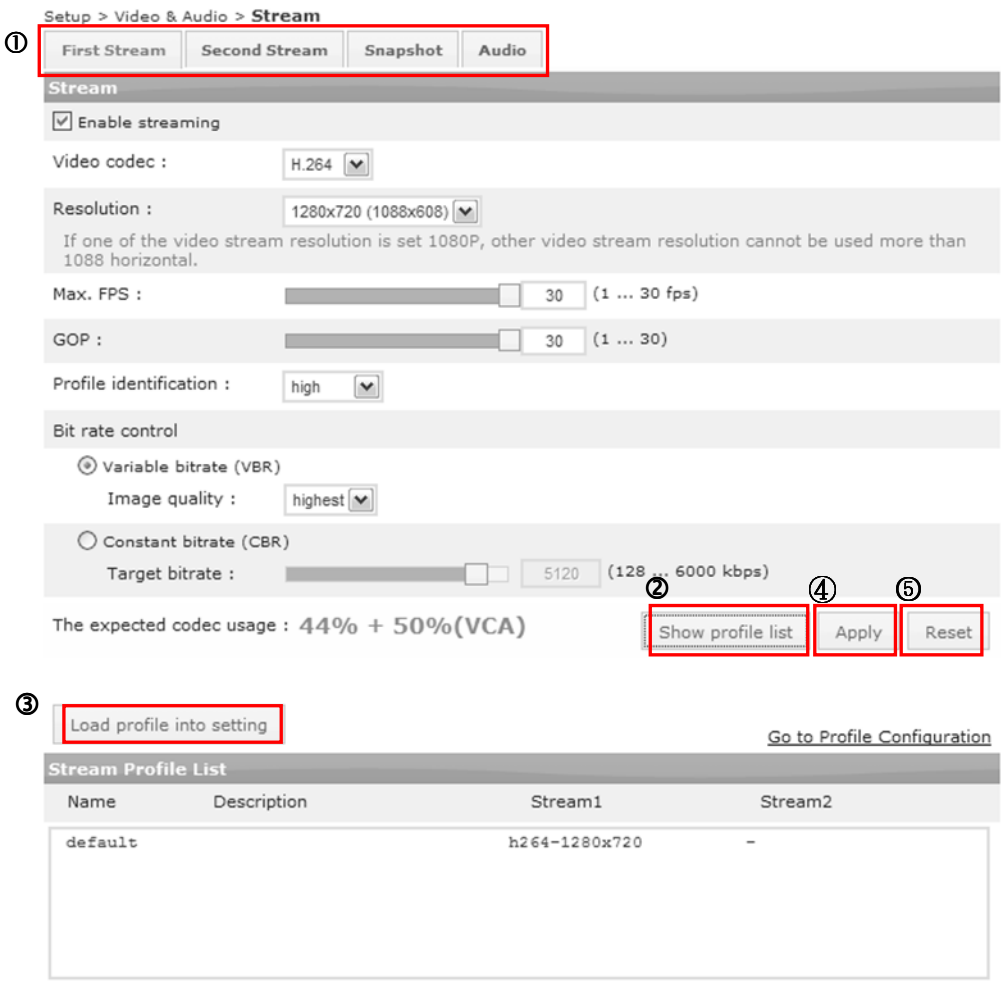
Audio Input
Volume: Enter the audio input volume. The available range is from 0 to 225.
Codec: G.711 is supported for the audio codec.
Sampling Frequency: The sampling frequency is selectable between 8kHz and 16kHz.

Audio Output
Volume: Enter the audio output volume. The available range is from 0 to 255.
TCP/IP listen port: Set the port for listening to the audio received from the camera. The default is 6000 and the range is from 1 to 65535.

After the setting, make sure to click the OK button to save changes.

5.2.6. Stream

To configure predefined stream profile, go to **Setup** > **Video&Audio** > **Stream**.



①This part has same structure with **Setup > Encoder Profile** and actual stream is applied by this page.

② Clicking the 'Show profile list' will display the profile with currently activated stream information

③ Highlight the profile from the list and click the 'Load profile into setting' button to bring up the profile that a user wish to configure.

④ Click this button to apply all changes to the currently loaded profile.

⑤ Removes the typed values or settings of current page and returns to the 'latest-

applied’ values.

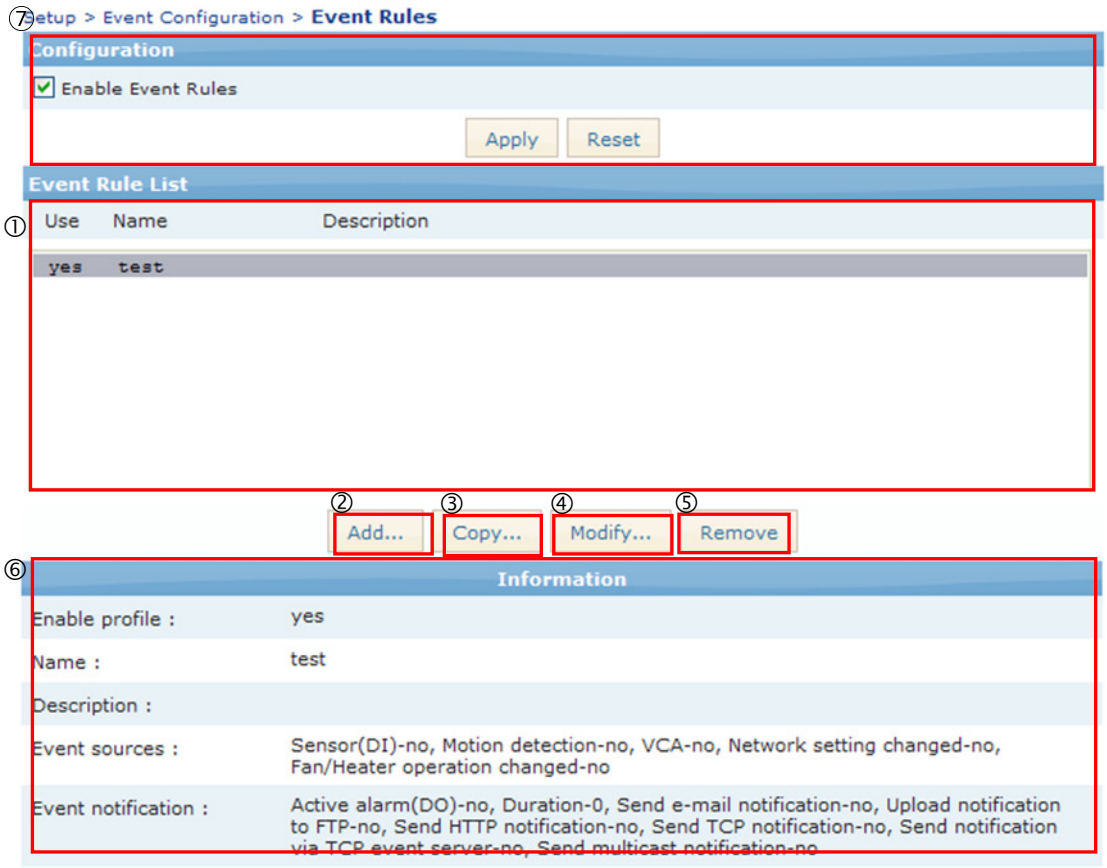
5.3. EVENT CONFIGURATION

Event Configurations allow users to set up the notification of occurred events. The event sources such as DI and motion detection can publish event messages when an event is generated. The available event subscribers include DO, email, FTP, and HTTP.

Before you create an event profile, go to the desired subscriber configuration page (E-Mail Recipient, FTP Notification, or HTTP Notification) and complete the required server settings.

5.3.1. Event Rules

After the event subscriber configuration, you can make several event profiles with different options of event source and notification. Go to **Setup** > **Event Configuration** > **Event Profile** to manage the event profile. On this page, you can configure the event source type and specify how to send notification message when an event trigger is activated.



You can check the defined profile lists on the main page, and add, copy, modify or remove a profile.

① **Event Mapping Lists**: Lists the defined event profiles.

② **Add**: Click this button to add a profile.

③ **Copy**: Select the desired profile to copy and click this button to copy an existing profile. Copying an event profile allows you to easily create multiple profiles with the same configuration.

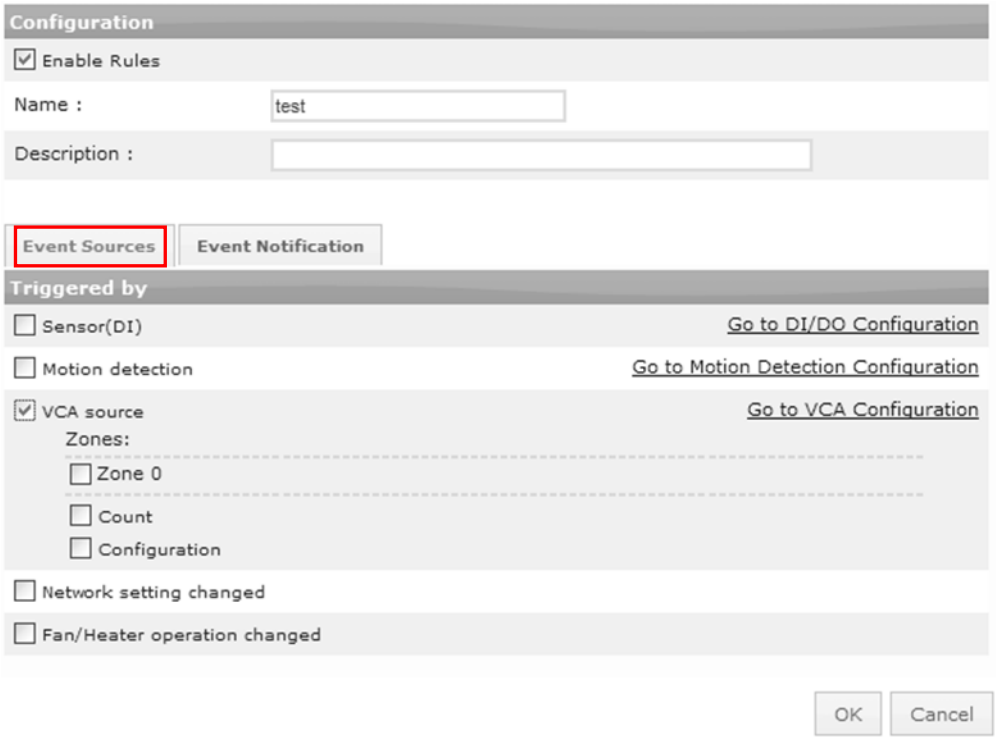
④ **Modify**: Select the desired profile to modify and click this button to modify the current setting of the profile. When the pop up window appears, modify the profile information. You can change all the information you have input while adding the profile list.

⑤ **Remove**: To remove a profile, select the desired profile and click this button.

⑥ **Information**: Displays the detailed information of the selected profile.

⑦ Check the checkbox to activate rules.

If you click the *Add*, *Copy*, or *Modify* button, then the profile configuration page appears as shown below. On this page, you can configure the settings for event source and event notification.



Basic Configuration

Check the 'Enable rules' to activate the profile. Specify the profile name for easier identification of the functions and enter a brief description of the profile.

Event Source Configuration

To configure the event sources, click the Event Source tab.

Sensor (DI)

Select the *Enable sensor* check box to enable DI as the event source. There is a hyperlink to access the DI/DO configuration page.

Motion detection
Select the *Enable motion detection* check box to enable motion detection as the event source. Selecting the check box displays the motion detection options as shown above. Set the time for motion interval from 0 to 100 seconds to avoid continuous triggered MD events. Finally select the motion detection zones to use as the event source from the list. There is also a hyperlink to access the motion detection configuration page.

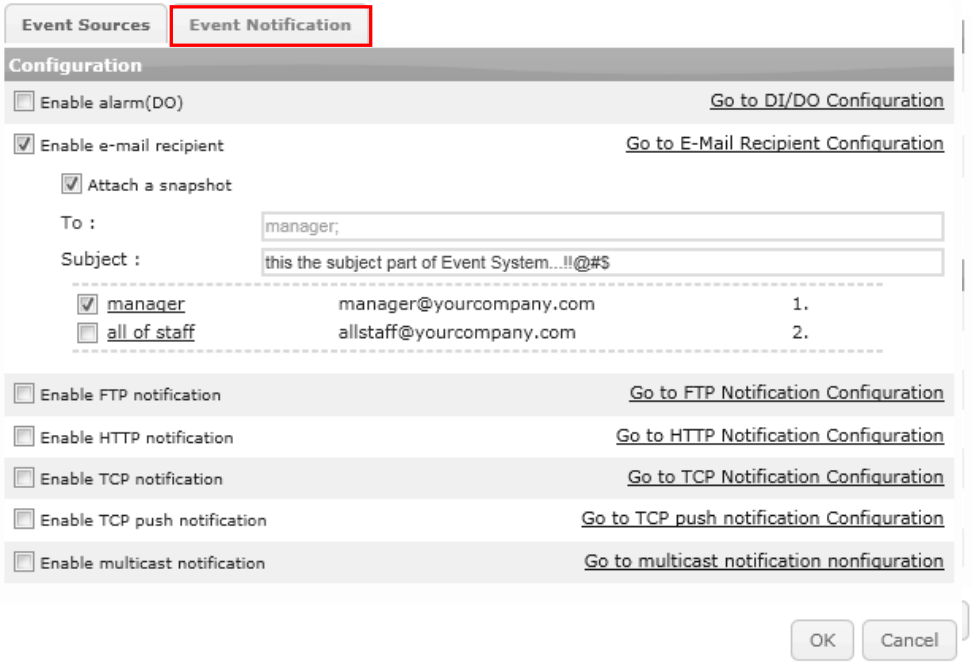
VCA source
Select the VCA events that are to be notified. Available options may differ by purchased analysis options. There is also a hyperlink to access the VCA configuration page

Network setting changed
This option allows the user to receive events when network setting is changed.

Fan/Heater operation changed
This option allows the user to receive events when operation of fan and heater is changed.

Event Notification Configuration

To configure the event sources, click the Event Notification tab.



Active Alarm (DO)
Enable the check box to activate the DO for the event publisher. Specify the alarm duration. The *duration time* indicates for how long does the DO works. For example, if you input '0,' a DO device keeps working until a user turns it off manually. If you input '10,' a DO device will work for 10 seconds and finish the operation.

Send E-mail notification
Enable the check box to send E-mail to designated recipients. To attach a snapshot image, select the *Attach a snapshot* check box. From the recipient list, select the recipient to send the notification. To create a new recipient that is not on the list, go to **Setup** > **Event Configuration** > **E-Mail Recipient** and create a new recipient information. Once the desired recipient is selected, write the subject for the email.

Upload notification to FTP
Enable the check box to activate the FTP notification method. To attach a snapshot image, select the *Attach a snapshot* check box. From the FTP server list, select the FTP server to send the notification. To create a new FTP server that is not on the list, go to **Setup** > **Event Configuration** > **FTP Notification** and create a new FTP server information.

Send HTTP Notification
Enable the check box to activate HTTP notification method. From the HTTP notification list, select the HTTP server to send the notification. To create a new HTTP server that is not on the list, go to **Setup** > **Event Configuration** > **HTTP Notification** and create a new HTTP server information.

Send TCP Notification
Enable the check box to activate TCP notification method. To configure a new TCP server, go to **Setup** > **Event Configuration** > **TCP Notification** and configure TCP server information.

Send Notification via TCP event server
Enable the check box to activate TCP event server notification method. To configure a new TCP server, go to **Setup** > **Event Configuration** > **TCP SErver** and configure TCP server.

Send Multicast Notification
Enable the check box to activate Multicast notification method. To configure a new multicast, go to **Setup** > **Event Configuration** > **Multicast Notification**.

Note

To attach a snapshot image on the configuration of E-mail Recipient or FTP notification, make sure the snapshot setting from **Setup** > **Video & Audio** > **Encoder Profile** has been enabled.

After the configuration, select *OK* to save the changes.

5.3.2. Motion Detection

To set up the zones and rules configuration required for the motion detection, go to **Setup** > **Event Configuration** > **Motion Detection**.

How to configure the motion detection zones

1. On the display window, click the left mouse button and drag the mouse diagonally until the desired size is made.
2. On the Information panel, configure the drawn motion detection zone; Select or unselect the *Show* check box to display/hide the created zone.
3. Provide relevant name and description of the motion detection zone on its text box.
4. Enter the value sensitivity and object size on its text box.
5. Click the *Save* button to save changes.

What is Sensitivity?

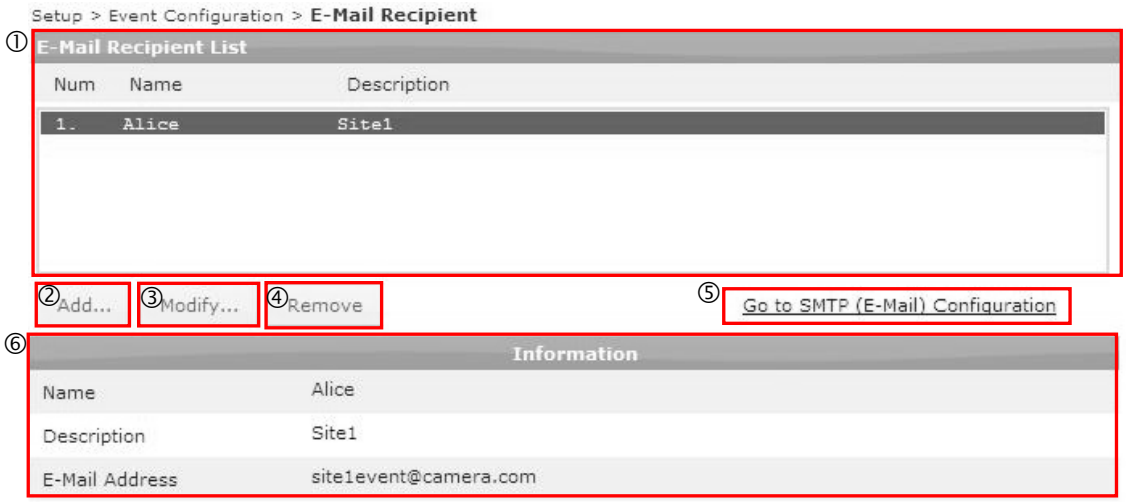
Every motion detection zone is divided into multiple squares, which is called ‘Macro blocks.’ Each of macro blocks consists in groups of 16 x 16 pixels. The value of sensitivity means the sensitivity of each macro block. To configure the zone less sensitive than the factory default (128), set the number value higher; to configure the zone more sensitive than the factory default, set the number value lower.

What is Object size?

The object size value means the proportion of the macro blocks which has exceeded the configured sensitivity. If you want to configure the zone less sensitive than the factory default (128), set the number value higher; to configure the zone more sensitive than the factory default, set the number value lower.

5.3.3. E-mail recipient

To configure the email recipient list for event notification, go to **Setup** > **Event Configuration** > **E-Mail Recipient**.



① **E-mail Recipient List**: Lists the defined e-mail recipient names.

② **Add**: Click this button to add e-mail recipient information.

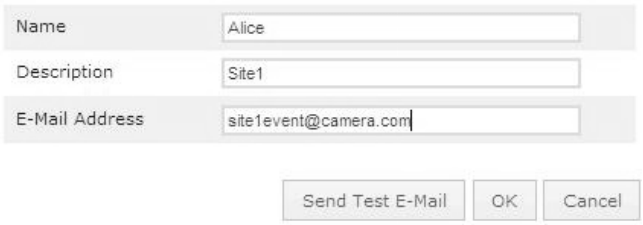
③ **Modify**: Select an e-mail recipient name and click this button to modify the current information of the e-mail recipient.

④ **Remove**: Select an e-mail recipient name and click this button to remove from the list.

⑤ **Go to SMTP Configuration**: If you want to receive notification messages via e-mail, you need to configure the SMTP server information first. Go to **Setup** > **Network Configuration** > **SMTP(E-Mail)**, and complete the required settings.

⑥ **Information**: Displays the detailed information of the selected e-mail recipient from the list.

Clicking either *Add*, *Copy*, or *Modify* button will display the configuration page shown below.



Name
Specify the e-mail recipient name.

Description
Input a brief description of the e-mail recipient to easily distinguish.

E-Mail Address
Enter the e-mail address of the e-mail recipient. If you use host name, a valid DNS server must be specified in TCP/IP network settings.

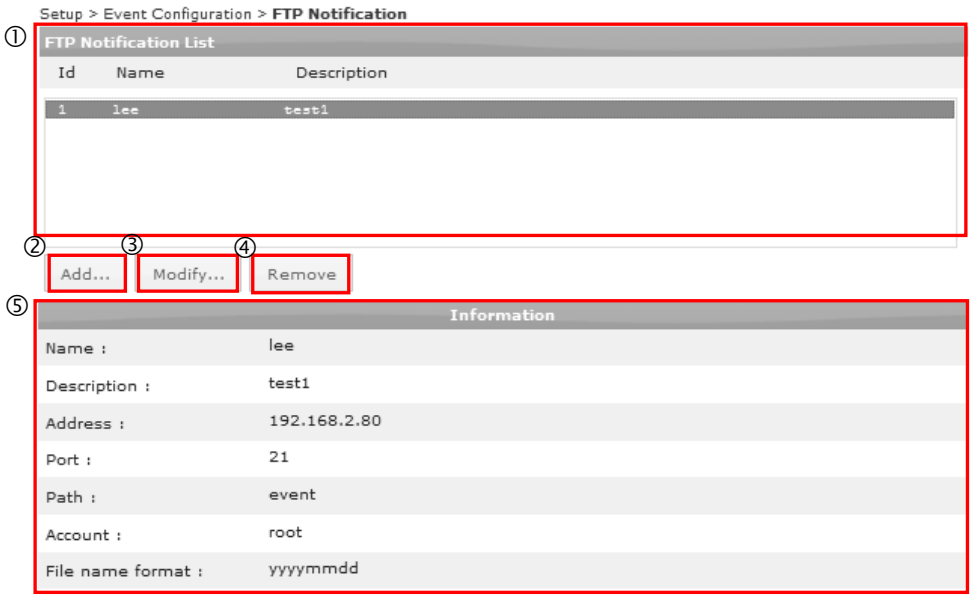
Send Test E-Mail
To test the entered e-mail address, click the *Send Test E-Mail* button. If the e-mail address is available, '*Send okay*' message appears next to the test button.

Note

After the setting, make sure to click the *OK* button to save changes.

5.3.4. FTP Notification

To configure the FTP server for event notification, go to **Setup** > **Event Configuration** > **FTP Notification**.



You can check the defined FTP server list on the main page, and add, modify, or remove server information.

① **FTP Notification List**: Lists the defined FTP server names.

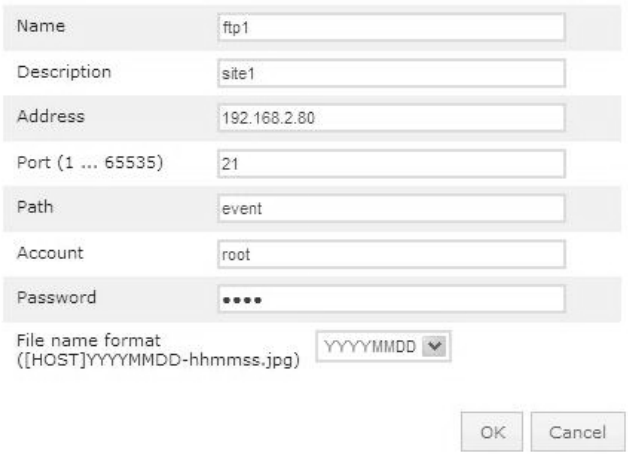
② **Add**: Click this button to add FTP server information.

③ **Modify**: Select an FTP server name and click this button to modify the current information of the FTP server.

④ **Remove**: Select an FTP server name and click this button to remove from the list.

⑤ **Information**: Displays the detailed information of the selected FTP server from the list.

Clicking either *Add* or *Modify* button will display the configuration page shown below.



Name
Specify the FTP server name.

Description
Input a brief description of the server to easily distinguish.

Address
Enter the IP address of the FTP server.

Port
Enter the server port number. The default is 21.

Path
Enter the folder name where the created files will be placed. If the folder does not exist on the server, the specified folder name will be automatically created on the FTP server.

Account and password
Enter the login user name and password of the FTP server. The account and password information must be entered even for the anonymous FTP.

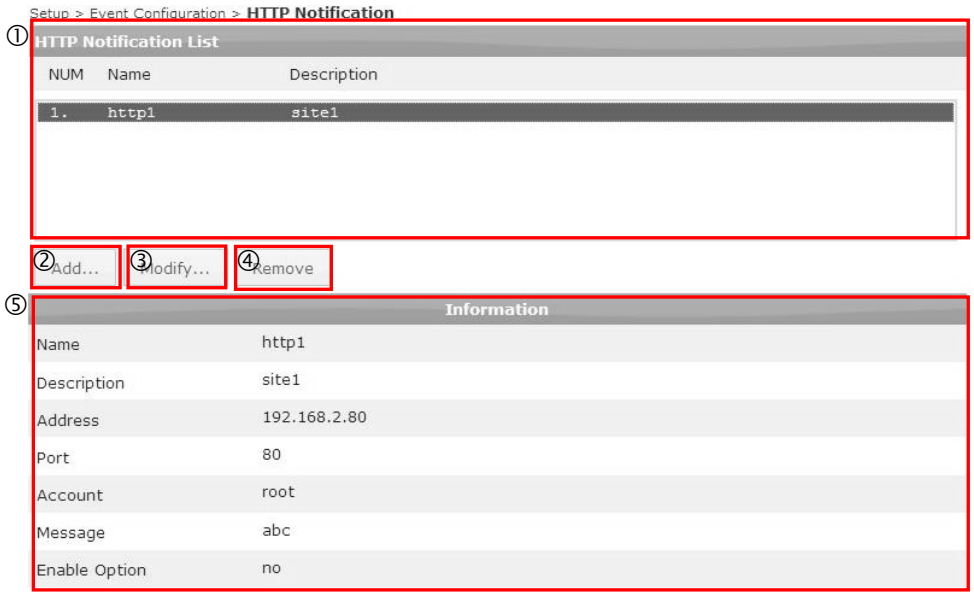
File name format
Select the desired date format.

Note

After the setting, make sure to click the OK button to save changes.

5.3.5. HTTP Notification

To configure the HTTP server for event notification, go to **Setup** > **Event Configuration** > **HTTP Notification**.



You can check the defined HTTP server list on the main page, and add, modify, or remove server information.

① **HTTP Notification List**: Lists the defined HTTP server names.

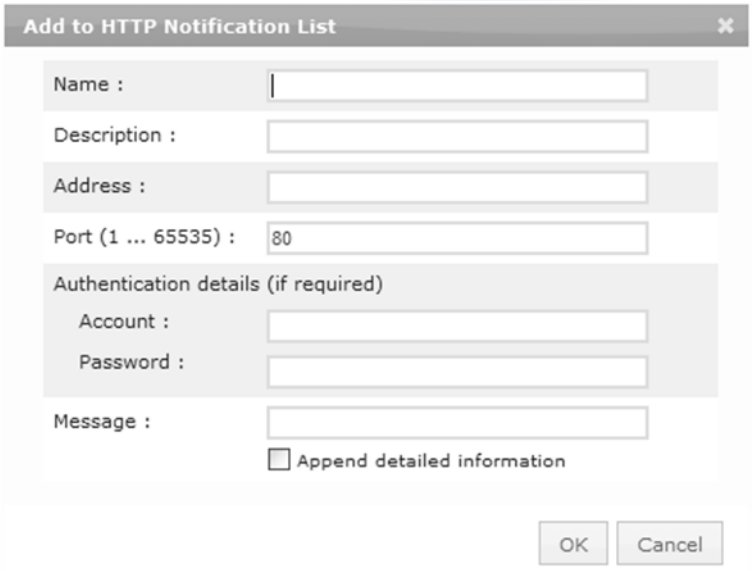
② **Add**: Click this button to add HTTP server information.

③ **Modify**: Select an HTTP server name and click this button to modify the current information of the FTP server.

④ **Remove**: Select an HTTP server name and click this button to from the list.

⑤ **Information**: Displays the detailed information of the selected HTTP server from the list.

Clicking either *Add* or *Modify* button will display the configuration page shown below.



Name
Specify the HTTP server name.

Description
Input a brief description of the server to easily distinguish.

Address
Enter the IP address of the HTTP server.

Port
Enter the server port number. The default is 80.

Account and password
Enter the login user name and password of the HTTP server. If you want to skip the login authentication process, leave the text boxes blank.

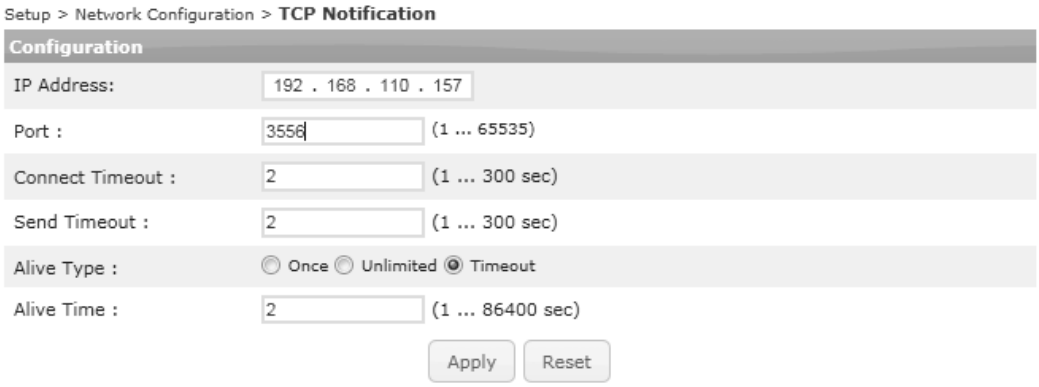
Message
Enter the message that you want to send with. Enabling the 'Append detailed information' will add event details in message.

Note

After the setting, make sure to click the OK button to save changes.

5.3.6. TCP Notification

To configure the TCP push for event notification, go to **Setup** > **Event Configuration** > **TCP Push Notification**.



IP Address, port
Type the configuration of TCP server.

Connect Timeout
TCP push tries to connect to TCP server during the setting time, but if connection is not made during the setting time, TCP push will stop to try to connect.

Send Timeout
Holding time for data transmission when event occurs.

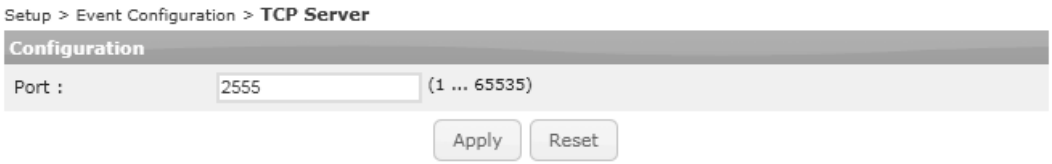
Alive Type
You can configure the condition of connection and the default value is *Timeout.*

- **Once:** Only one connection is made for each event. There is no check that the connection is succeeded or not.
- **Unlimited**: The connection continues for data transmission whether event occurs or not.
- **Timeout**: After the last data transmission if there is no event for setting time *of alive time* the connection will be disconnected.

Alive Time
When *alive type* is configured as *Timeout*, the connection will be continued for *alive time*.

5.3.7. TCP Server

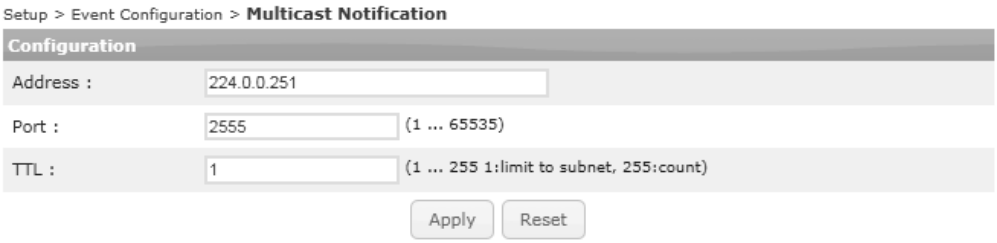
To configure the TCP server, go to **Setup** > **Event Configuration** > **TCP Server**. You can use TCP server to get the event notification from the device and send them to the client application.



Port
Type the utilized port number to deliver the event message program

5.3.8. Multicast Notification

To configure the multicast server, go to **Setup** > **Event Configuration** > **Multicast Notification**. You can use Multicast server to get the event notification from the device and send them to the client application.

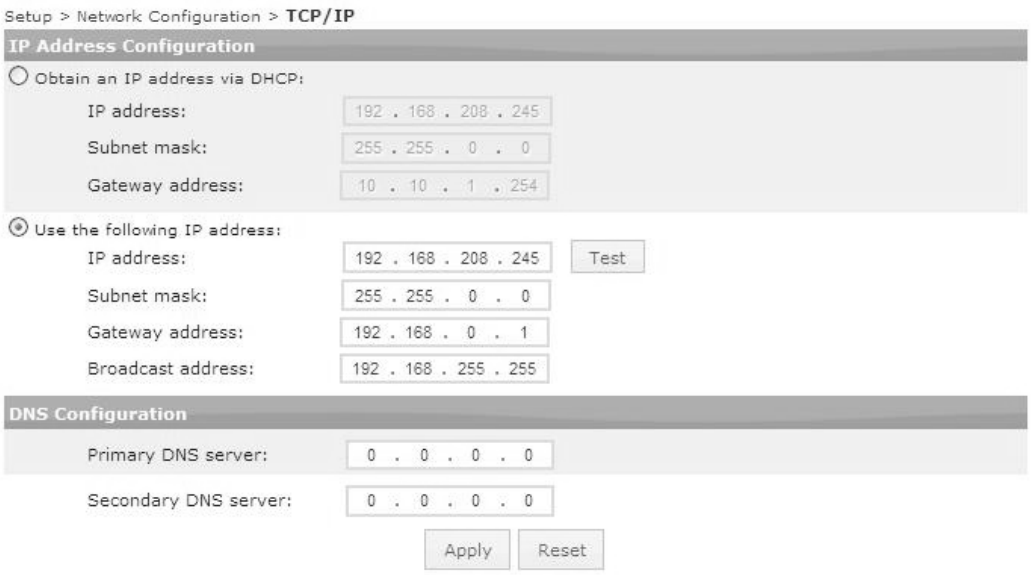


Type Address, port, and TTL according to your system setting. Factory default is 2555.

5.4. Network Configuration

5.4.1. TCP/IP(DHCP, Static IP, DNS setting)

To change the TCP/IP setting, go to **Setup** > **Basic Configuration** > **TCP/IP**.


Setup > Network Configuration > TCP/IP
IP Address Configuration
Obtain an IP address via DHCP:
IP address: 192 . 168 . 208 . 245
Subnet mask: 255 . 255 . 0 . 0
Gateway address: 10 . 10 . 1 . 254
Use the following IP address:
IP address: 192 . 168 . 208 . 245
Test
Subnet mask: 255 . 255 . 0 . 0
Gateway address: 192 . 168 . 0 . 1
Broadcast address: 192 . 168 . 255 . 255
DNS Configuration
Primary DNS server: 0 . 0 . 0 . 0
Secondary DNS server: 0 . 0 . 0 . 0
Apply
Reset

IP Address Configuration

IP Configuration by DHCP
If you want to get your IP from DHCP server automatically, check this option and click the Apply button. When the dialog box appears on the screen, click the *OK* button.

Use the static IP address
If you want to use your device with a static IP, select '*Use the following IP address*' and input the following information:

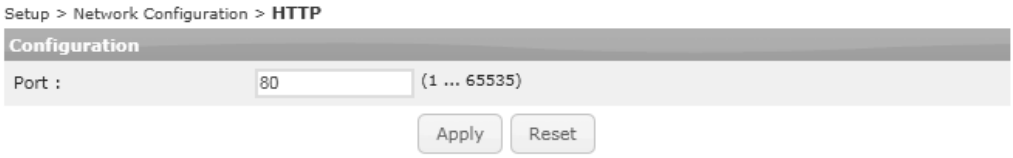
- **IP address**: The IP address of your device. The test button shows if the typed IP address is occupied or not. If the typed address is available, "Okay" appears next to the Test button. If the typed address has been taken already, "Fail" appears next to the button.
- **Subnet mask**: The address of subnet mask of your device.
- **Gateway address**: The gateway address of your device.
- **Broadcast address**: It is automatically fixed by the subnet mask and IP address of your own. For example, if you use B class (255.255.0.0) of mask, the broadcast address will be 192.168.255.255.

DNS Configuration

Type the IP address of DNS server you use.

5.4.2. HTTP Server

To change the HTTP server setting, go to **Setup** > **Network Configuration** > **HTTP**.



Set the appropriate port number that is being utilized.

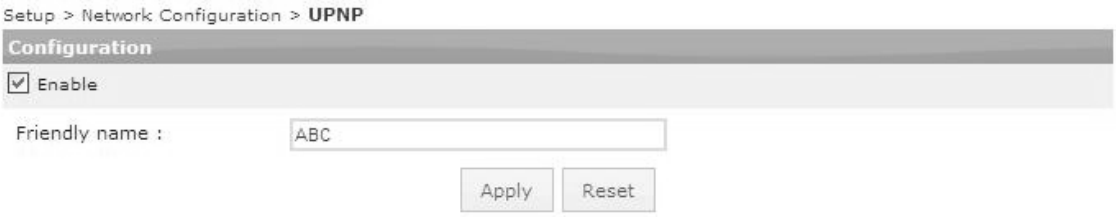
5.4.3. NTP Server

To change the NTP server setting, go to **Setup** > **Network Configuration** > **NTP**.

NTP Server Lists
Users can set up to four NTP servers. To enable the NTP servers, DNS server setting must be completed from **Setup** > **Network Configuration** > **TCP/IP**.

5.4.4. UPnP

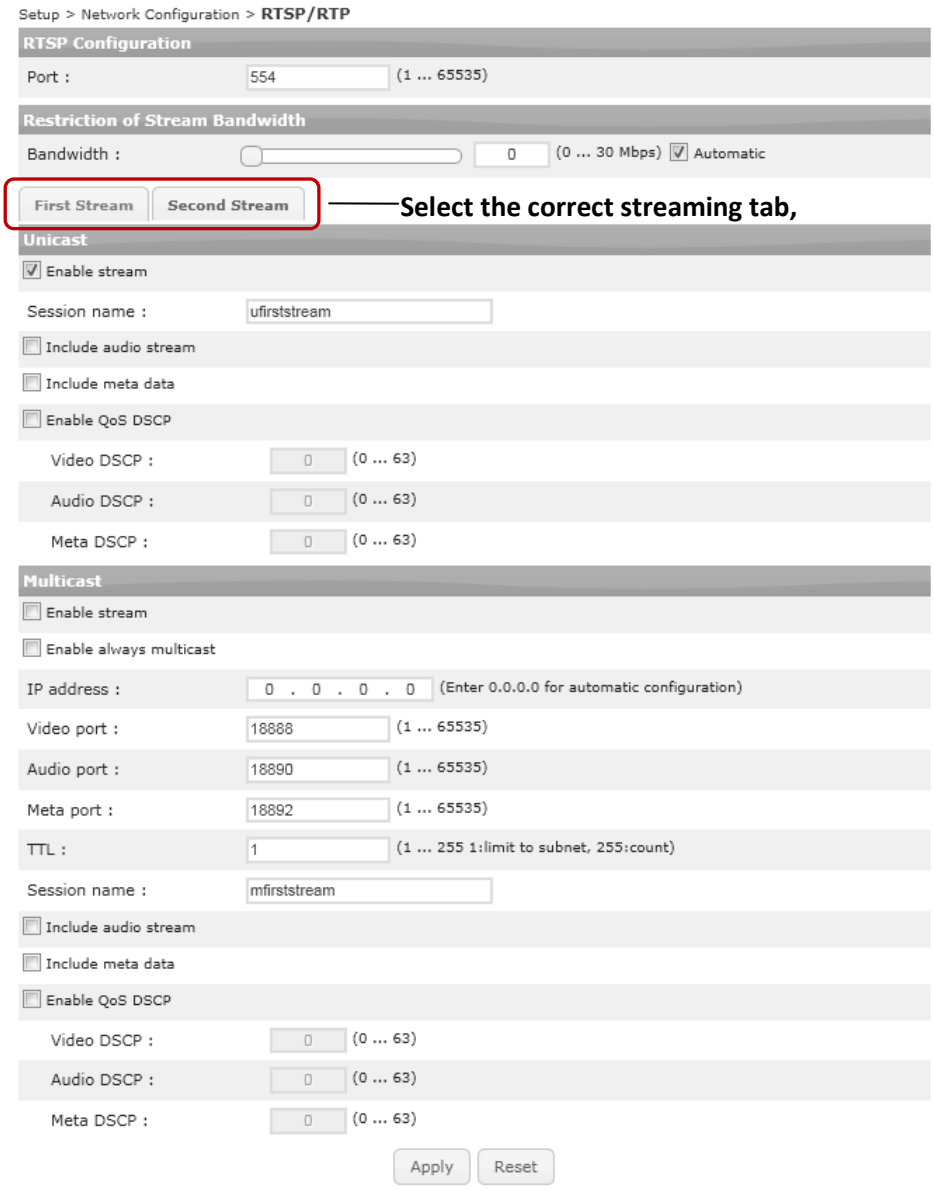
To change the Universal Plug & Play configuration, go to **Setup** > **Network configuration** > **UPnP**.



UPnP allows IP devices to connect seamlessly, and simplify the implementation of network in remote PC environments. On this page, users can enable or disable UPnP by clicking the Enable check box, and apply the desired name (friendly name).

5.4.5. RTSP/RTP (multicast or unicast)

For the RTSP/RTP setting, go to **Setup** > **Network Configuration** > **RTSP/RTP**.


Setup > Network Configuration > RTSP/RTP
RTSP Configuration
Port : 554 (1 ... 65535)
Restriction of Stream Bandwidth
Bandwidth : 0 (0 ... 30 Mbps) Automatic
First Stream
Second Stream
Select the correct streaming tab,
Unicast
Enable stream
Session name : ufirststream
Include audio stream
Include meta data
Enable QoS DSCP
Video DSCP : 0 (0 ... 63)
Audio DSCP : 0 (0 ... 63)
Meta DSCP : 0 (0 ... 63)
Multicast
Enable stream
Enable always multicast
IP address : 0 . 0 . 0 . 0 (Enter 0.0.0.0 for automatic configuration)
Video port : 18888 (1 ... 65535)
Audio port : 18890 (1 ... 65535)
Meta port : 18892 (1 ... 65535)
TTL : 1 (1 ... 255 1:limit to subnet, 255:count)
Session name : mfirststream
Include audio stream
Include meta data
Enable QoS DSCP
Video DSCP : 0 (0 ... 63)
Audio DSCP : 0 (0 ... 63)
Meta DSCP : 0 (0 ... 63)
Apply
Reset

The product supports multicast and unicast for both stream channels. Click the appropriate stream tab and configure the RTP session as required by your network system.

RTSP Configuration

Set the port number for RTSP streaming.

Restriction of Stream Bandwidth

You can limit the stream bandwidth. To set the stream bandwidth limitation, input the desired number on the text box (from 0 to 30Mbps). For example, if you input 30Mbps, then all users accessed to the system share the specified bandwidth.

RTSP Configuration for UNICAST

Session name
Type the appropriate session name. The allowed range for the session name is 64 characters with alphabets, Arabic numbers, and underscore bar(_).

Include audio stream
Check this box to include the audio stream in addition to the video stream.

Include Metadata
Check this box to add the metadata.

Enable QoS DSCP
By enabling the Quality of Service (QoS) feature, you can specify priority level of network traffic for video, audio, and metadata (motion detection and VCA). For each traffic type, determine the DSCP (Differentiated Services Codepoint) value, which represents a QoS class in the Differentiated Services (DiffServe) model. For the details about the DiffServ standard, refer to RFC2474 and RFC2475.

RTSP configuration for MULTICAST

IP Address
In order receive the streaming data from the device, set the IP address of group which is used for PC to join. '0,0,0,0' is configured as a factory default and it enables router program to generate the available IP for the device automatically. If you want to use specific address, type the address in the blank.

RTP multicast is not allowed for streaming even if the address and the port information are known.

How does auto configuration of IP address works?

As the session name for each RTP session is defined already on the server, your PC can get the stream by the ‘rtsp:// rtsp server ipaddress : port / rtp session name’ without the manual decision of IP address on the webpage.

Port
Set the port number used for router to receive the streaming data from the product (No need for unicast). '18888' is set for video data of 1st stream and '28888' is for video data of 2nd stream.

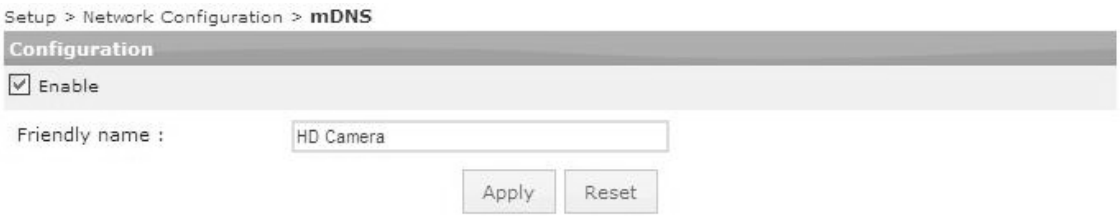
TTL
Set the TTL value. If you set 1 for TTL, it means the packet will pass only in a subnet (No need for unicast).

What is TTL?
It's the abbreviation of Time to live. If data is sent out from the encoder via network and all of the packets are alive permanently on the network, it will cause the big network load. TTL helps to reduce the network load by controlling the time of staying on network. For example, if you set the TTL as 50, the data will be deleted after passing by 50 routers.

All other options are the same as the Unicast.

5.4.6. mDNS (Multicast DNS)

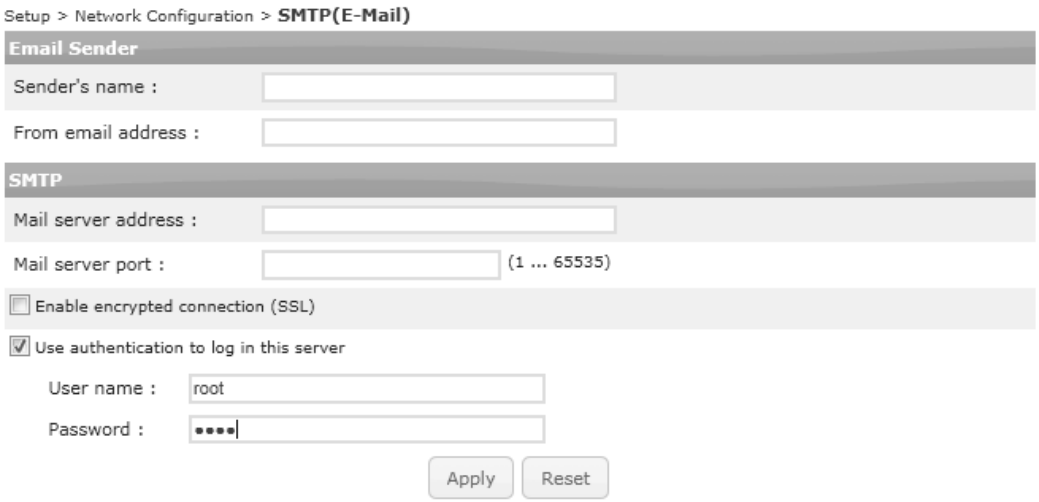
For the multicast DNS setting, go to **Setup** > **Network Configuration** > **mDNS**.



Configuration
If you check the box of 'Enable,' mDNS is activated. To use the IPAdminTool to identify the device, it must be enabled. You can type a friendly name to be shown on the application program.

5.4.7. SMTP

To change the SMTP setting, go to **Setup** > **Network Configuration** > **SMTP(E-Mail).**



You can set the user's email account and server to apply this SMTP for the event subscriber or any other SMTP required purpose.

Configuring user information

Sender's name
Type the name of the sender; it can be either generic notification bot, name of the administrator, or the specific camera device, depends on its purpose.
Input range: 40 characters limit

From email address
Type the e-mail address of a sender.
Input range: 128 characters limit

Configuring server information

Mail server address
In order to send an email, the product needs the information of user's mail server. Type the host name or IP address of the mail server. If you use the host name, it requires the DNS registration. Check the DNS configuration from **Network Configuration** > **TCP/IP** and see if your DNS configuration is correct. If you use host name, a valid DNS server must be specified in TCP/IP network settings.
Input range: 128 characters limit

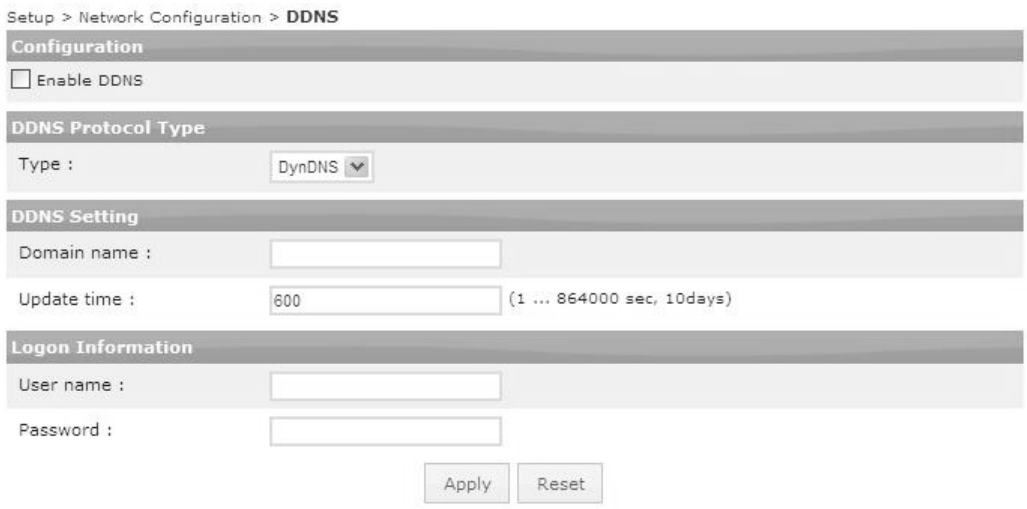
Mail server port
Type the mail server's port number within the range from 0 to 65535.

Enable encrypted connection (SSL)
If your email server requires encryption process of SSL and TLS, select the '***Enable encrypted connection (SSL)***' check box. TLS (Transport Layer Security) and SSL (Secure Sockets Layer) algorithm can be required for the security of communication over networks. It depends on your email server and you should check out the communication protocol of SMTP server.

Use authentication to log in this server
If login information is mandatory before connecting to the server, check the box. Once the box is checked, the user name and password boxes appear for user to type.
User name input range: 128 characters limit
Password input range: 32 characters limit

5.4.8. DDNS (Dynamic DNS)

To change the Dynamic DNS setting, go to **Setup** > **Network Configuration** > **DDNS**.



Configuration
Enable or disable DDNS by selecting the check box.

DDNS Protocol Type
Select the desired protocol type. DynDNS is only available option..

DDNS Setting

Type the domain name you want to use for the product and define the update time. The factory default is 600 seconds, and it enables the product to notify the DDNS of the current domain name in given length interval.

Logon Information
Type the user name and password of your DDNS account.

8 asterisks cannot be used for the password.

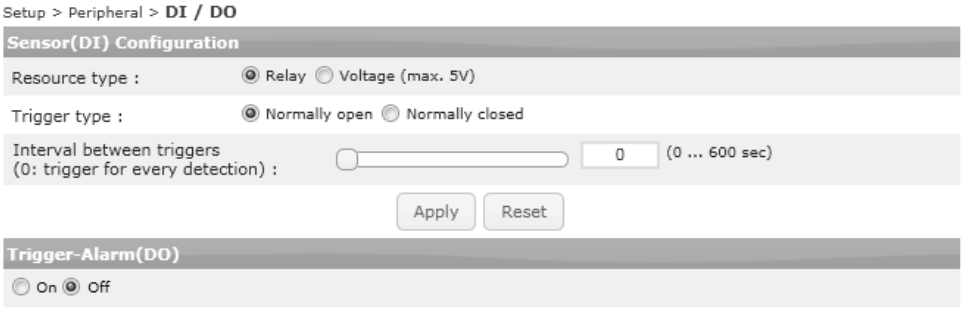
5.5. VCA

For the details of VCA, refer to the VCA Manual.

5.6. Peripheral

5.6.1. DI/DO control

To configure the digital input and output to control external devices such as sensors or alarms, go to **Setup** > **Peripheral** > **DI/DO**. Please refer to the product user guide to know more about the electrical characteristic of these ports.



Sensor (DI) Configuration

Resource type
Select the type of sensor module. It can be either voltage [maximum 5 volts] or relay.

Trigger type
Select between 'Normally open' and 'Normally closed'. .

Interval between triggers
Set the detection time interval for event publishers. For example, if you input '0,' it generates events whenever DI is activated. When the value is set to'10,' then only 1 event will be triggered every 10 seconds even if multiple DI events are detected within 10 seconds.

Trigger Alarm (DO)

Select "On" or "Off" for DO.

5.7. Maintenance

5.7.1. Users

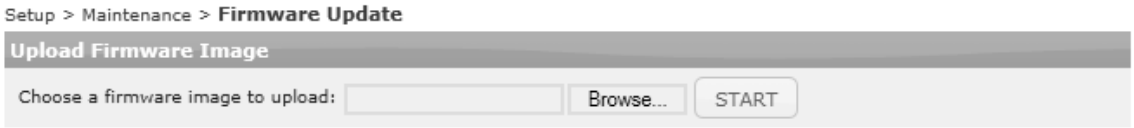
The Users configuration page from **Setup** > **Maintenance** > **Users** operates the same way as of the page from **Setup** > **Basic Configuration** > **Users**. Refer to *5.1.1. Users* for the details.

5.7.2. Date & Time

The Date & Time configuration page from **Setup** > **Maintenance** > **Date & Time** operates the same way as of the page from **Setup** > **Basic Configuration** > **Date & Time**. Refer to *5.1.3. Date & Time* for the details.

5.7.3. Firmware Update

To update firmware, go to **Setup** > **Maintenance** > **Firmware Update** and follow the directions below.



Firmware update via the tool

To enable the firmware update via the IPAdminTool.exe, highlight the device to upgrade the firmware, and click “Update” button. Then, the FWUpdate window appears where users can set multiple devices to upgrade simultaneously.

Refer to the ‘*IPAdminTool User’s Manual.pdf*’ for the details how to update the firmware on your devices by using this tool.

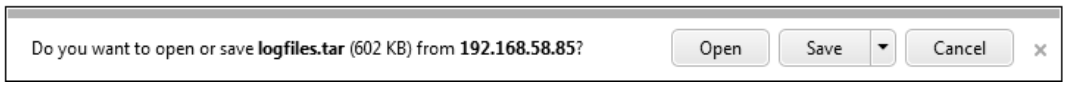
Firmware update on the web browser

To update the firmware on the web browser, click the Browse button and search the firmware file. If you select the file to upload, the *Upload* button appears next to the *Browse* button. Click the *Upload* button to update the firmware.

5.7.4. System Log

To download system log, go to **Setup** > **Maintenance** > **System Log** and follow the directions as below.

Click the download button, file download dialog box appears.

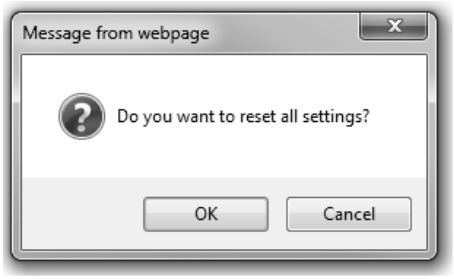


5.7.5. Reset All Settings

All information is initialized except user, network and time zone.

To reset the system setting to the factory default setting, go to **Setup** > **Maintenance** > **Reset All Setting** and follow the directions below.

1. Click the *Reset All setting* button, and then the dialog box appears as below.



2. Click the OK button to reset all settings. When a dialog box appears to ask rebooting the system, click the OK button.

3. The reboot starts automatically. Then, count for 60 seconds after showing ”Initializing…..”

4. Check if all the settings are returned to the factory default values.

5.7.6. Reboot

To reboot the system on the web browser, go to **Setup** > **Maintenance** > **Reboot**.

Click the Start Reboot button to reboot the device.

5.8. About

5.8.1.Information

To find the product information including the hardware specification and software version, go to **Setup** > **About** > **Information**.

Setup > About > **Information**

Full name :	IPX3302HD-5344
Short name :	IPX3302HD
Firmware version :	1.2.0B.8430
MAC address :	00:13:23:06:3A:55
Pan/Tilt :	Repositioning
Fan/Heater :	Yes/No
Focus/Zoom :	MFZ
DC Auto-Iris :	DC-IRIS
Day/Night :	TDN
IR Illumination :	None
TV-Out :	1
AudioIn/AudioOut :	1/1
DI/DO :	1/1
RS-485 :	0
USB :	1
SD :	1

REVISION HISTORY

MANUAL#	DATE (M/D/Y)	COMMENTS
01A.01	11/09/2011	Created
02A.01D	02/29/2012	FW V 1.2.0. updated
02A.02	04/05/2012	Official FW V 1.2.0 updated
02A.03	05/17/2012	Contents update and fixes
02A.04	08/16/2012	Live Page screen capture (PTZ) part removed
02A.05	09/04/2012	Minor description and grammar corrections
02A.06	10/09/2012	Zoom/Focus Page's "Calibration" button update

** Refer to **WHAT'S NEW** page (p.4) for more detailed update contents.